



Please type a plus sign (+) inside this box → ☐

PTO/SB/21 (6-98)  
Approved for use through 09/30/2000. OMB 0651-0031  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

1617  
RECEIVED  
APR 1 8 2003  
TECH CENTER 160012900

|  |                      |                     |      |
|--|----------------------|---------------------|------|
| <b>TRANSMITTAL FORM</b><br><i>(to be used for all correspondence after initial filing)</i> | Application Number   | 10/037,064          |      |
|  | Filing Date          | November 7, 2001    |      |
|  | First Named Inventor | Friederike Zahm     |      |
|  | Group Art Unit       | 1617                |      |
|  | Examiner Name        | Jiang, Shaojia A.   |      |
| Total Number of Pages in This Submission   |                      | Confirmation Number | 6197 |

| ENCLOSURES (check all that apply)   |   |  |
|---|---|--|
| <input type="checkbox"/> Fee Transmittal Form<br><input type="checkbox"/> Fee Attached  | <input type="checkbox"/> Assignment Papers (for an Application)<br><input type="checkbox"/> Drawing(s)<br><input type="checkbox"/> Licensing-related Papers<br><input type="checkbox"/> Petition Routing Slip (PTO/SB/69) and Accompanying Petition<br><input type="checkbox"/> Petition to Convert to a Provisional Application<br><input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address<br><input type="checkbox"/> Terminal Disclaimer<br><input type="checkbox"/> Small Entity Statement<br><input type="checkbox"/> Request for Refund | <input type="checkbox"/> After Allowance Communication to Group<br><input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences<br><input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)<br><input type="checkbox"/> Proprietary Information<br><input type="checkbox"/> Status Letter<br><input checked="" type="checkbox"/> Additional Enclosure(s) (please identify below):<br>Fee Sheet; PTO 1449 with References; Australian Patent Office Action; and Post Card. |
| <input type="checkbox"/> Amendment / Response<br><input type="checkbox"/> After Final<br><input type="checkbox"/> Affidavits/declaration(s) |   |  |
| <input type="checkbox"/> Extension of Time Request  |   |  |
| <input type="checkbox"/> Express Abandonment Request  |   |  |
| <input checked="" type="checkbox"/> Information Disclosure Statement  |   |  |
| <input type="checkbox"/> Certified Copy of Priority Document(s)   |   |  |
| <input type="checkbox"/> Response to Missing Parts/Incomplete Application   |   |  |
| <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53  |   |  |

| SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT |                     |
|--|---------------------|
| Firm or Individual name                    | Dennis P. Tramaloni |
| Signature                                  |                     |
| Date                                       | April 10, 2003      |

| CERTIFICATE OF MAILING  |                     |      |                |
|---|---------------------|------|----------------|
| I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail on the date shown below in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231: |                     |      |                |
| Typed or printed name   | Dennis P. Tramaloni |      |                |
| Signature   |                     | Date | April 10, 2003 |

+ Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



PATENT APPLICATION

THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED  
APR 18 2003  
TECH CENTER 1600/2900

In re patent application

Inventors Friederike Zahm, et al.

Serial No.: 10/037,064

Filed: November 7, 2001

Hoffmann-La Roche Inc.  
340 Kingsland Street  
Nutley, NJ 07110  
April 10, 2003

For: **METHOD OF TREATING HEPATITIS C INFECTION**

**REQUEST TO CHARGE DEPOSIT ACCOUNT**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Transmitted herewith is an **SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT** in the above-identified application.

- ☒ Please charge my Deposit Account No. 08-2525 in the amount of \$180.00 which is the fee in connection with the filing of the enclosed paper.
- ☒ The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 08-2525.
- ☒ This sheet is provided in duplicate.

  
Attorney for Applicant  
Dennis P. Tramaloni  
(Reg. No. 28,542)  
Telephone: (973) 235-4475  
Telefax: (973) 235-2363

Discovery House, Phillip ACT 2606  
PO Box 200, Woden ACT 2606  
Australia  
Phone +61 -2 6283 2999  
Facsimile +61 -2 6283 7999  
Internet <http://www.ipaustralia.gov.au>  
ABN 38 113 072 755

28 November 2002

Shahnaz Irani  
SPRUSON & FERGUSON  
GPO Box 3898  
SYDNEY NSW 2001

Your Ref: 532290:SSI

Examiner's report no. 2 on patent application no. 45033/99  
by F.HOFFMANN-LA ROCHE AG

Last proposed amendment no. 2

Dear Madam/Sir,

Thank you for the reply of 20 November 2002 to the last report. My report is based on the specification as if amended by the statement of proposed amendments filed with that reply and dated the same. I have considered it and believe that there are lawful grounds of objection to the application as proposed to be amended. These grounds of objection are:

5. Objections 2 and 3 are maintained. The claims are not fairly based on the invention described in the description. The attorney has submitted that the invention resides in the combination therapy of PEG-IFN- $\alpha$  conjugate and Ribavirin, and that the PEG-IFN- $\alpha$  dose can be administered during the same or different period of time that the patient receives dosage of Ribavirin. It is understood that PEG-IFN- $\alpha$  may be administered at different times to Ribavirin, however the invention resides in a synergistic effective amount of both compounds being within the body to treat chronic Hepatitis C infection. This is supported by the attorney's submissions where it is stated a synergistic effect is seen on the table on page 7, the synergistic effect is established where a synergistic effective amount of each compound is present in the body. As currently drafted the claim encompasses the individual use of each compound, and is not limited to the use of each compound where there is a synergistic effective amount of each compound. As the claims encompass the individual use of each compound, the claims are not fairly based on the invention described in the description.
6. The application is not for a manner of new manufacture within the meaning of Sub-section 18(1) of the Patents Act. In claims 9,15 and dependent claims all that is defined is a **collocation** of known components. I do not see any new or improved result arising from any working inter-relationship between these components. As currently drafted the claim encompasses the individual components with no synergistic relationship between them.
7. Claims 9,15 and dependent claims lacks clarity. It is unclear if the claim is directed towards a collocation or a method of using the collocation.
8. Claim 9,15 and dependent claims are not novel and do not involve an inventive step when compared to the following prior art documents:

- a. Monkarsh SP et al, A J Biochem, 1997, 247, pages 434-440. This document discloses PEG-IFN- $\alpha$ . -C11
- b. PUBMED ABSTRACT Accession Number: 8681488; Nieforth KA et al, Clin Pharmacol Ther, Jun 1996, 59(6), pages 636-46. This document discloses PEG-IFN- $\alpha$ . -C12
- c. PUBMED ABSTRACT Accession Number: 9326177 ; Telfer PT et al, Br J Haematol, Sept 1997, 98(4) pages 850-5. This document discloses ribavirin. -C10
- d. PUBMED ABSTRACT Accession Number 11322259; Hayden FG et al, Antivir Ther, Jan 1996, 1(1) pages 51-6. This document discloses ribavirin. -C13

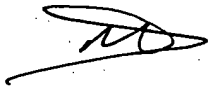
As currently drafted the claim encompasses the individual components with no synergistic relationship between them. Furthermore the claims merely have to be suitable for use to treat chronic Hepatitis C infection and not limited to "when used".

9. The invention defined in the claims does not involve an inventive step when compared with the following the prior art document: PUBMED ABSTRACT Accession Number: 9326177 ; Telfer PT et al, Br J Haematol, Sept 1997, 98(4) pages 850-5. This document discloses the use of combination therapy of chronic Hepatitis C using interferon- $\alpha$  and ribavirin. This document is related to a similar problem to the applicant's problem. The problem in the current application is to provide a treatment for chronic Hepatitis C. It is well known that conjugating cytokines with PEG improves cytokine stability. Therefore a person skilled in the art would be influenced to use PEG-IFN- $\alpha$  in combination with ribavirin to treat chronic Hepatitis C. For this reason a person skilled in the art would directly and without difficulty by routine steps, arrive at a solution which is the same as the claimed solution, and therefore the claimed invention lacks an inventive step.

NOTE: I apologise for introducing new citations at this stage of examination, however these were found when searching the newly drafted claims.

You have until 24 September 2003 to overcome all my objection(s) otherwise your application will lapse. You will need to pay a monthly fee for any response you file after 12 months from the date of the first report.

Yours faithfully,



ANTHONY MURFETT  
Examiner of Patents, Section B3  
Telephone: (02) 6283 2243

Telephone contact: SHUBHRA CHANDRA  
Senior Examiner of Patents  
Telephone: (02) 6283 2264

Principals  
 D C Griffith\*  
 BE(Hons) FIPTA  
 J D O'Connor\*  
 BSc MRACI FIPTA  
 S D Williams\*  
 BA LLB(Sydney) LL(M) (London)  
 G M Turner\*  
 BE FIPTA  
 J F McCann\*  
 BSc(Hons) PhD FIPTA  
 B M Munday\*  
 BSc(Hons) DIC PhD  
 DipLaw(SAB) FIPTA  
 A L Freeman\*  
 BA LLB(ANU) LL(M) (UTS)  
 R M Miller\*  
 BE BlegS FIPTA  
 L D Rippard\*  
 BE FIPTA  
 C L Bodkin\*  
 BSc(Hons) DPhil MBA  
 FIPTA  
 S D Berggren\*  
 BSEE MSEE LLB FIPTA  
 G J Gurr\*  
 BE(Hons) BAppSc  
 ME(Res) GradDipBus  
 GradDipLS FIPTA  
 R D Curnick\*  
 BE FIPTA  
 J M K Afaras\*  
 BEc LLB  
 G J Skelly\*  
 BSc LLB DipEd  
 A N Blattman\*  
 BScAgr(Hons) PhD  
 GradDip FIPTA  
 S Irani  
 BSc(Hons) LLB(Hons) FIPTA  
 T M Berger\*  
 BSc LLB(Hons)  
 M H Pollock\*  
 LLB(Hons)  
 Associates  
 R M Clarkson  
 BSc(Hons) MSc FIPTA  
 F Dela Paz  
 BE(Hons) MLS  
 C Elliott  
 BSc(Hons) MSc  
 GradDip FIPTA  
 J J Everard\*  
 B Juris LLB  
 LM (Columbia)  
 M Friedgut  
 BE Dip Mgt GradDipLS  
 E J Genocchio  
 BE MLS MIP FIPTA  
 S P Kane  
 BSc LLB  
 V J Kirov\*  
 BA (Hons) LLB  
 K Kortian\*  
 LB  
 A W Lee  
 BSc MRACI FIPTA  
 W Mackenzie  
 BSc FIPTA  
 D Massey  
 BE(Hons) MLS (IPLaw)  
 K Myers  
 BScAgr(Hons) PhD MLS  
 A E O'Brien  
 BSc(Hons) PhD MLS  
 M Perkins  
 BSc BE(Hons) FIPTA  
 A Power  
 BSc MSc DipLaw (BAB)  
 LM FIPTA  
 Legal Practitioner only  
 also a US Patent Agent  
 Technical Assistants/  
 Legal Practitioners  
 C Andrews  
 BSc(Hons) GradDipDesSc  
 J Atchison  
 BE(Hons) MCom  
 Brass  
 BSc(Eng) MSc(Eng) BCom  
 L Caldwell  
 BCom LLB  
 Creek  
 BSc DipLaw (SAB)  
 D Einfeld  
 BA LLB  
 J Govenlock  
 BSc(Hons) PhD  
 S Gripton  
 BEng(Hons)  
 G D Henning  
 BSc(Eng) MSc  
 R C Jackson  
 BA(Hons) LLB(Hons)  
 B Johnson  
 BA MA DipLaw (SAB)  
 J Mahony  
 BSc BE(Hons)  
 R Mytton  
 BA DipLaw (LPAB)  
 D Recchia  
 BSc(Hons) PhD  
 van Rensburg  
 BEng(Hons)  
 Consultants  
 R Shanahan  
 BSc(Hons) DipLaw(BAB)  
 IPTA  
 L Kennedy\*  
 A LLB  
 Johnston\*  
 A LLB

# Spruson & Ferguson

Patent and Trade Mark Attorneys Founded 1887  
 Australia • New Zealand

Level 35, St. Martins Tower, 31 Market Street, Sydney NSW 2000, Australia  
 Mail to: GPO Box 3898, Sydney NSW 2001, Australia  
 Telephone: +61 2 9207 0777 Facsimile: +61 2 9261 5486  
 mail@sprusons.com.au www.sprusons.com.au  
 ABN 84 362 252 431

Frist: 17.1.2003  
 Orientierung US  
 + Ueberprüf. AJ, IL

Our Ref 532290:SSI  
 9 December, 2002

F. Hoffmann-La Roche AG  
 Patent Department (PLP)  
 124 Grenzacherstrasse  
 CH-4070 Basel  
 Switzerland

Attention : Dr H Kjellsaa-Berger

Dear Hanny

Re: Australian Patent Application No. 45033/99  
 F. Hoffmann-La Roche AG  
 Title: Use of PEG-IFN-alpha and Ribavirin for the Treatment of Chronic  
 Hepatitis C  
 Your Ref: 20107  
 Due Date : 24 December 2002

A further report has been received from the Australian Patent Office in relation to the above patent application. This report is enclosed for your consideration.

Please note that the nominal deadline for acceptance is **24 December 2002**, and the absolute final date for acceptance is **24 September 2003**. Monthly extension fees are payable if a response is lodged after the first mentioned date.

## Items 5 and 6

The Examiner has maintained the second and third objections of his first report in respect of the claims filed at the Australian Patent Office with our response of 15 November 2002. The Examiner has maintained his objection that the claims do not define the invention and are therefore not a manner of new manufacture on the basis that the claims do not define that a synergistic effective amount of each component must be administered in order to treat chronic hepatitis C infection. Accordingly, this objection can be overcome by amending the claims to define that there is a synergistic effective amount of each component present within the body. Please confirm with us that you are happy to make this amendment.

## Items 7 and 8

The Examiner is objecting to claims 9 and 15 which are of the form "X when used....". These objections should be overcome when the claims are amended to define the synergistic relationship between the individual components and we also propose to amend the wording of these claims to clarify that they are limited to treating chronic hepatitis C infection. We also propose to argue against the Examiner's seventh objection, as it is clear that claims 9 and 15 are directed towards the combination therapy of PEG-IFN-α conjugate and Ribavirin when used in treating chronic hepatitis C infections.

Bitte sofort Literatur im Zedo

Associated with:

Sprusons Solicitors  
 St. Martins Tower,  
 31 Market Street, Sydney, Australia  
 Telephone: +61 2 9207 0888  
 Facsimile: +61 2 9267 9974  
 mail@sprusons.com.au  
 www.sprusons.com.au

Ella Cheong Mirandah & Sprusons  
 111 North Bridge Road,  
 #22-01 Peninsula Plaza, Singapore  
 Telephone: +65 6333 7200  
 Facsimile: +65 6333 7222  
 mail@ecms-asia.com  
 www.ecms-asia.com

Ella Cheong Mirandah & Sprusons  
 Suite 1808, 18th Floor, Plaza Permai (IGB Plaza)  
 Jalan Kampar, 50400 Kuala Lumpur, Malaysia  
 Telephone: +60 3 4043 1593  
 Facsimile: +60 3 4043 1595  
 malaysia@ecms-asia.com  
 www.ecms-asia.com

**Item 9**

The Examiner is arguing that all the claims lack inventive step in light of the prior art document PUBMED ABSTRACT Accession No: 9326177; Telfer PT et al, British Journal of Haematology, September 1997, 98(4), pages 850-855. The Examiner is arguing that this document discloses the use of combination therapy of chronic hepatitis C using interferon- $\alpha$  and ribavirin. The Examiner argues that this document is related to the present problem addressed by the present application. The Examiner argues that it is well known that conjugating cytokines with PEG improves cytokine stability. Accordingly, the Examiner argues that a person skilled in the art would be influenced to use PEG-IFN- $\alpha$  in combination with ribavirin to treat chronic hepatitis C. The Examiner concludes that a person skilled in the art would therefore arrive at the claimed solution by taking routine steps only and therefore the claimed invention lacks an inventive step.

We look forward to receiving your comments concerning this objection.

**Voluntary Amendments**

Please advise whether you wish to make any further amendments to the claims (other than those suggested above) when responding to the enclosed Office Action. We advise that new matter can be inserted into the specification, however, that matter cannot be claimed.


We look forward to receiving your instructions prior to 24 March 2003, in order that we may prepare and file a response at the Australian Patent Office and so put this application in order for acceptance. In the meantime, if you have any questions or comments concerning the above, please do not hesitate to contact us.

Our debit note is enclosed for your kind attention.

We remind you that there is a continuing obligation to disclose search results to the Australian Patent Office in respect of searches conducted prior to grant of the Australian patent. Please see our earlier correspondence for details of this obligation. Please also note that a transitional provision, which has recently been amended, extends the initial deadline for disclosing search results to 1 June 2003 if it would otherwise fall before then.

Yours sincerely

**SPRUSON & FERGUSON**

  
Shahnaz Irani

Encl.

28 November 2002

Shahnaz Irani  
SPRUSON & FERGUSON  
GPO Box 3898  
SYDNEY NSW 2001

Your Ref : 532290:SSI

Examiner's report no. 2 on patent application no. 45033/99  
by F.HOFFMANN-LA ROCHE AG

Last proposed amendment no. 2

Dear Madam/Sir,

Thank you for the reply of 20 November 2002 to the last report. My report is based on the specification as if amended by the statement of proposed amendments filed with that reply and dated the same. I have considered it and believe that there are lawful grounds of objection to the application as proposed to be amended. These grounds of objection are:

5. Objections 2 and 3 are maintained. The claims are not fairly based on the invention described in the description. The attorney has submitted that the invention resides in the combination therapy of PEG-IFN- $\alpha$  conjugate and Ribavirin, and that the PEG-IFN- $\alpha$  dose can be administered during the same or different period of time that the patient receives dosage of Ribavirin. It is understood that PEG-IFN- $\alpha$  may be administered at different times to Ribavirin, however the invention resides in a synergistic effective amount of both compounds being within the body to treat chronic Hepatitis C infection. This is supported by the attorney's submissions where it is stated a synergistic effect is seen on the table on page 7, the synergistic effect is established where a synergistic effective amount of each compound is present in the body. As currently drafted the claim encompasses the individual use of each compound, and is not limited to the use of each compound where there is a synergistic effective amount of each compound. As the claims encompass the individual use of each compound, the claims are not fairly based on the invention described in the description.
6. The application is not for a manner of new manufacture within the meaning of Sub-section 18(1) of the Patents Act. In claims 9,15 and dependent claims all that is defined is a **collocation** of known components. I do not see any new or improved result arising from any working inter-relationship between these components. As currently drafted the claim encompasses the individual components with no synergistic relationship between them.
7. Claims 9,15 and dependent claims lacks clarity. It is unclear if the claim is directed towards a collocation or a method of using the collocation.
8. Claim 9,15 and dependent claims are not novel and do not involve an inventive step when compared to the following prior art documents:

- a. Monkarsh SP et al, Anal Biochem, 1997, 247, pages 434-440. This document discloses PEG-IFN- $\alpha$ .
- b. PUBMED ABSTRACT Accession Number: 8681488; Nieforth KA et al, Clin Pharmacol Ther, Jun 1996, 59(6), pages 636-46. This document discloses PEG-IFN- $\alpha$ .
- c. PUBMED ABSTRACT Accession Number: 9326177 ; Telfer PT et al, Br J Haematol, Sept 1997, 98(4) pages 850-5. This document discloses ribavirin.
- d. PUBMED ABSTRACT Accession Number 11322259; Hayden FG et al, Antivir Ther, Jan 1996, 1(1) pages 51-6. This document discloses ribavirin.

As currently drafted the claim encompasses the individual components with no synergistic relationship between them. Furthermore the claims merely have to be suitable for use to treat chronic Hepatitis C infection and not limited to "when used".

9. The invention defined in the claims does not involve an inventive step when compared with the following the prior art document: PUBMED ABSTRACT Accession Number: 9326177 ; Telfer PT et al, Br J Haematol, Sept 1997, 98(4) pages 850-5. This document discloses the use of combination therapy of chronic Hepatitis C using interferon- $\alpha$  and ribavirin. This document is related to a similar problem to the applicant's problem. The problem in the current application is to provide a treatment for chronic Hepatitis C. It is well known that conjugating cytokines with PEG improves cytokine stability. Therefore a person skilled in the art would be influenced to use PEG-IFN- $\alpha$  in combination with ribavirin to treat chronic Hepatitis C. For this reason a person skilled in the art would directly and without difficulty by routine steps, arrive at a solution which is the same as the claimed solution, and therefore the claimed invention lacks an inventive step.

NOTE: I apologise for introducing new citations at this stage of examination, however these were found when searching the newly drafted claims.

You have until 24 September 2003 to overcome all my objection(s) otherwise your application will lapse. You will need to pay a monthly fee for any response you file after 12 months from the date of the first report.

Yours faithfully,



ANTHONY MURFETT  
Examiner of Patents, Section B3  
Telephone: (02) 6283 2243

Telephone contact: SHUBHRA CHANDRA  
Senior Examiner of Patents  
Telephone: (02) 6283 2264